

A new species of *Cerithium* (Gastropoda, Cerithiidae) from the East China Sea

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Abstract

Cerithium ivani n. sp. is described based on material trawled from deep waters of the East China Sea. The new species has a peculiar circular aperture, with an unusually expanded columellar callus. It is compared with the following species, living in deep Indo-Pacific waters: *Cerithium abditum* Houbriek, 1992, *C. gloriosum* Houbriek, 1992, *C. flemischi* K. Martin, 1933 and *C. interstriatum* Sowerby, 1855.

Riassunto

Viene descritta la nuova specie *Cerithium ivani* su materiale proveniente da acque profonde del Mar della Cina orientale. La nuova specie è stata confrontata con diverse specie, simili nella morfologia conchigliare: *Cerithium abditum* Houbriek, 1992, *C. gloriosum* Houbriek, 1992, *C. flemischi* K. Martin, 1933 e *C. interstriatum* Sowerby, 1855. I principali caratteri distintivi di *Cerithium ivani* n. sp. sono rappresentati dall'apertura rotondeggiante e dal callo columellare insolitamente espanso.

Key Words

Gastropoda, Cerithiidae, *Cerithium*, new species, China Sea.

Introduction

Some shells of the genus *Cerithium*, trawled in deep waters of the East China Sea, were obtained from local dealers in Zhejiang (Eastern China). Data on the locality where the material comes from are not precise, because geographical coordinates were not available. These shells were compared with similar species from the Indo-Pacific, namely *Cerithium abditum* Houbriek, 1992, *C. gloriosum* Houbriek, 1992, *C. flemischi* K. Martin, 1993 and *C. interstriatum* Sowerby, 1855, and are regarded as a new species, here described.

Systematics

Family CERITHIIDAE Férussac, 1822

Genus *Cerithium* Bruguière, 1789

(type species *C. adansonii* Bruguière, 1792)

Cerithium ivani sp. n.

Fig. 1A-L

Type material

Holotype, H 16.0 mm, D 5.5 mm, East China Sea, 180 m (Acquario Civico di Milano, ACQMI 0822501). Paratype A, H 18.9 mm, D 6.1 mm, East China Sea, 300/500 m (Cecalupo coll.). Paratype B, H 16.5 mm, D 6.0 mm, East China Sea, 300/500 m (Cecalupo coll.). Paratype C, H 18.9 mm, D 6.4 mm East China sea, 180 m (Cecalupo coll.). Paratype D, H 18.2 mm, D 6.0 mm, East China Sea, 180 m (Cecalupo coll.). Paratype E, H 19.9 mm, D 6.7 mm, East China Sea, 180 m (I. Perugia coll., Ravenna). Paratype F, H 12,8 mm, D 4,2 mm, East China Sea,

300-500 m (Museo Civico di Storia Naturale Milano, MSNM Mo 34040) ex Coll. I. Perugia.

Type locality

East China Sea, at depth of 180-500 m.

Other material

Nine additional shells, well preserved but not fully adult, from the East China Sea, 300-500 m (5 in coll. Perugia, 4 in coll. Cecalupo).

Distribution

Known from the type locality only.

Etymology

The specific name, *ivani*, is a tribute to Ivan Perugia, good friend of the Author and expert of the Mediterranean and Indo-Pacific malacofauna.

Description

Shell small, solid, turriculated, lanceolate, apical angle 19°-20°, not remarkably variable in shape and sculpture. Protoconch light purple, consisting of 2.25 whorls, with the first whorl roundish and smooth, the others convex, with 10-11 axial prosocline striae light purpled in colour. Transition to teleoconch marked by the onset of a delicate cancellate sculpture of axial and spiral riblets. Teleoconch composed of 10-11 slightly convex whorls, separated by slightly oblique, deep sutures.

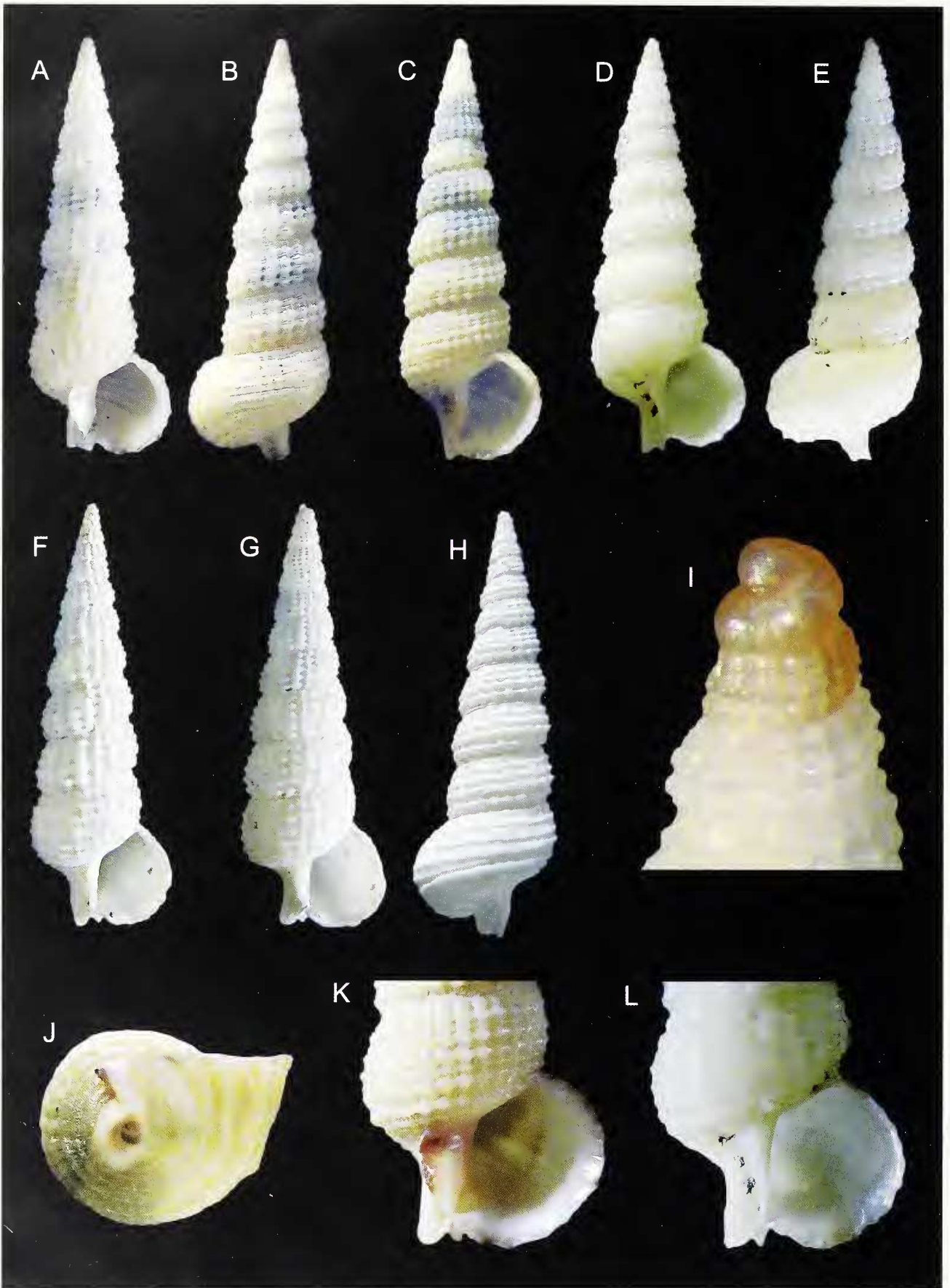


Fig. 1. *Cerithium ivani* n. sp. **A, B.** Holotype, h 16,0, d 5,5 mm, East China Sea, 180 m (Acquario Civico di Milano, ACQMI 0822501). **C.** Paratype A, h 18,9, d 6,1 mm, East China Sea, 300-500 m; **D, E.** Paratype B, h 16,5, d 6,0 mm, East China Sea, 300-500 m. **F.** Paratype D, h 18,2, d 6,0 mm, East China Sea, 180 m. **G, H.** Paratype C, h 18,9, d 6,4 mm, East China Sea, 180 m. **I.** Paratype A, detail of apical whorls. **J.** Paratype A, base view. **K.** Paratype A, last whorl and aperture. **L.** Paratype B, last whorl and aperture.

Fig. 1. *Cerithium ivani* n. sp. **A, B.** Olotipo, h 16,0, d 5,5 mm Mar della Cina orientale, 180 m (Acquario Civico di Milano, ACQMI 0822501). **C.** Paratipo A, h 18,9, d 6,1 mm, Mar della Cina orientale, 300-500 m; **D, E.** Paratipo B, h 16,5, d 6,0 mm, Mar della Cina orientale, 300-500 m. **F.** Paratipo D, h 18,2, D 6,0 mm, Mar della Cina orientale, 180 m. **G, H.** Paratipo C, h 18,9, d 6,4 mm, Mar della Cina orientale, 180 m. **I.** Paratipo A, dettaglio dei giri apicali. **J.** Paratipo A, base. **K.** Paratipo A, ultimo giro ed apertura. **L.** Paratipo B, ultimo giro ed apertura.

Spiral sculpture with 4 major narrow spiral cords and a finer one in subsutural position. Spiral cords crossing over slightly prosocline axial ribs numbering 22-23. Last whorl with 9 spiral cords and 26-28 axial ribs, giving a densely cancellate appearance. Pointed to rounded tubercles at the intersections between spiral and axial ribs. Growth striae between the ribs. Last whorl about 30% of total shell height. Aperture circular, with concave columella. Columellar callus thin, remarkably expanded on and beyond the columella. Siphonal canal short, deep, slightly deviated. Posterior sinus poorly developed. Outer lip slightly crenulated by the presence of spiral cords. Shell eburnean, with a purple-red spot on the upper part of the columellar callus. Operculum and soft parts unknown.

Remarks

After an extensive check in the malacological works also dealing with Cerithiidae (Kira, 1965; Habe, 1968; Springsteen & Leobrera, 1986; Dharma, 1988, 1992; Houbrick, 1992; Kubo & Kurozumi, 1995; Higo et al., 1999; Okutani, 2000; Higo et al., 2001; Poppe, 2008), it was clear that the specimens belonged to an undescribed species.

Cerithium ivani n. sp. is mainly characterized by the circular aperture, with the inner lip strongly expanded beyond the columellar axis.

The new species can be compared with the following species, with which it shares a narrow conical profile: *Cerithium abditum* Houbrick, 1992, *C. gloriosum* Houbrick, 1992, *C. flemischi* K. Martin, 1993 and *C. interstriatum* Sowerby, 1855. The last four species are characterized by a typical Cerithiidae multispiral protoconch with subsutural plicae, few (usually 2) pronounced spiral threads and a sinusigeral notch (Houbrick, 1992). Other differences in the teleoconch allow to separate these species from *C. ivani* n. sp. *Cerithium interstriatum*, the only species showing a columellar callus similar to that of *C. ivani* n. sp., though much less developed, differs by having a concave columella, slightly deviated siphonal canal and marked posterior sinus. *Cerithium abditum*, from deep waters of Philippines, Borneo and northern China Sea (Pratas Islands), differs by being smaller in size (up to 15.4 mm in height), turriculate, porcelain-type in colour, and with less convex whorls. *Cerithium gloriosum*, from the deep waters of the *Islas Glorieuses* (Comoros Islands) and of Borneo (from where it has been rarely reported) has only 3 spiral cords and 14-16 axial ribs. *Cerithium flemischi*, from deep waters (recorded at 1300 m: Houbrick, 1992: p. 93) of the Comoros Islands, Mozambique Channel and Philippines, has a larger shell (up to 52 mm), with the sculpture notably similar to that of *C. abditum*.

The genus *Ataxocerithium* Tate, 1894 shows a similar roundish aperture, but according to Houbrick (1987) the soft parts of *Ataxocerithium* point to the family Cerithiopsidae H. & A. Adams, 1853. Furthermore, the shells of *Ataxocerithium* are smaller (up to 20 mm in height) and with a more depressed conical profile.

Acknowledgements

I wish to thank Vittorio Garilli for his constructive critical reading of the manuscript and for useful tips, and Rafael La Perna for his kind assistance during the preparation of this work.

References

- DHARMA B., 1988. *Siput dan Kerang Indonesia (Indonesian Shells)*. PT. Sarana Graha, Jakarta, 111 pp.
- DHARMA B., 1992. *Siput dan Kerang Indonesia (Indonesian Shells II)*. PT. Verlag Christa Hemmen, Jakarta, 134 pp.
- HABE T., 1968. *Shells of the Western Pacific in Color*. Vol. 2. Hoi-kusha Publ., Osaka, 233 pp.
- HIGO S., CALLOMON P. & GOTO Y., 1999. *Catalogue and Bibliography of the Marine Shell-Bearing Mollusca of Japan (Gastropoda, Bivalvia, Polyplacophora, Scaphopoda)*. Alle Scientific Publications, 749 pp.
- HIGO S., CALLOMON P. & GOTO Y., 2001. *Catalogue and Bibliography of the Marine Shell-Bearing Mollusca of Japan (Gastropoda, Bivalvia, Polyplacophora, Scaphopoda)*. Alle Scientific Publications, Osaka, 208 pp.
- HOUBRICK R.S., 1987. Description of a new, giant *Ataxocerithium* species from Australia with remarks on the systematic placement of the Genus (Prosobranchia: Cerithiopsidae). *The Nautilus*, **101** (4): 155-161.
- HOUBRICK R.S., 1992. Monograph of the Genus *Cerithium* Bruguière in the Indo-Pacific (Cerithiidae: Prosobranchia). *Smithsonian Contribution to Zoology*, **510**: 1-211.
- KIRA T., 1965. *Shells of the Western Pacific in Color*. Vol. I. Hoi-kusha Publ., Osaka, 224 pp.
- KUBO H. & KUROZUMI T., 1995. *Molluscs of Okinawa*. Publ. Okinawa Shuppan Co., Japan, 263 pp.
- OKUTANI T., 2000. *Marine Mollusca in Japan*. Tokay University Press, Japan, xviii + 1175 pp.
- POPPE G.T., 2008. *Philippine Marine Mollusks*. Vol. I (Gastropoda Part I). ConchBooks, 758 pp.
- SPRINGSTEEN F.J. & LEOBRERA F.M., 1986. *Shells of the Philippines*. Kyodo Printing, Manila, 377 pp.